



MATHEMATICAL LITERACY PAPER 2 MEMORANDUM

1.1.1	US \$450	2			
1.1.2	R1 050	2			
1.1.3	Cat. 1 ticket for the final: US \$900	3			
1.1.4	Cat. 4 ticket for a group match: R140	3			
1.2.1	R 9,00 to 1 US \$	2			
1.2.2	January 2008	2			
1.2.3	November 2008	2			
1.2.4	R7,00 to 1 US \$		2.2.2	The number of matches has also increased over the years from 17 matches in 1930 to 64 matches at each tournament since France in 1998.	4
	Take the price of any ticket in ZAR and divide it by the price of the same ticket in US \$. For example Cat. 1 opening match: $3\,150 \div 450 = 7$	4	2.2.3	(a) $\approx 1\,000\,000 \div 22 \approx 45\,000$ (b) $\approx 1\,600\,000 \div 32 \approx 50\,000$ (c) $\approx 3\,600\,000 \div 52 \approx 69\,000$ (d) $\approx 3\,400\,000 \div 64 \approx 53\,000$	8
1.2.5	(a) $1\,120 \div 7 = 160$ (b) $250 \times 7 = 1\,750$	4	2.2.4	Average match attendance has not varied much over the years. This is almost certainly the result of limited stadium capacity	2
1.3	South African's have been advantaged by the use of the R 7,00 to 1 US \$. In the other months before 2010 the exchange rate was always higher and had these rates been used the tickets for South Africans would have been more expensive.	6	2.2.5	The people building stadiums would be interested in the average match attendance – this will impact on the size of the stadiums they manufacture.	
2.1.1	18 tournaments	2		The people running the tournament would be interested in the total number of tickets sold as this impacts on budgeting for the tournament.	4
2.1.2	Spain	2	3.1.1	Johannesburg	2
2.1.3	32 matches	2	3.1.2	17 June, 16h00	2
2.1.4	2 500 000 tickets	2	3.1.3	The Republic of Korea	2
2.1.5	$\approx 2\,750\,000 \div 64 \approx 43\,000$	3	3.1.4	Thursday	2
2.2.1	The line graph creates the impression that attendance at the world cups has seen a steady increase from the first tournament to the present – with a peak in attendance	4	3.1.5	Johannesburg ® Mangaung/Bloemfontein ® Durban	4

3.2.1	Monday	2
3.2.2	18:50	2
3.2.3	16:00 on Tuesday	2
3.2.4	08:00 on Wednesday	2
3.2.5	Abadom will be in Bloemfontein to watch the match against Greece on Thursday 17 June. The first time that he can take train 61002 to Durban is on Tuesday 22 June at 16:00 – the same time that the match starts in Durban. This train will not get him to Durban on time.	6
3.3	Several solutions are possible. One option:	
	74205 dep JHB at 14:20 on 14 June, arr BLM at 21:36 on 14 June	
	57035 dep BLM at 18:00 on 18 June, arr JHB at 08:10 on 19 June	
	76009 dep JHB at 07:44 on 20 June, arr DBN at 07:10 on 21 June	
	67010 dep DBN at 19:15 on 23 June, arr JHB at 07:44 on 24 June	15
4.1.1	91 m	2
4.1.2	190 m	2
4.2	3 cm : 91 m = 7 cm : x	
	$x = \frac{91 \times 7}{3}$	
	$\approx 210 \text{ m}$	8
4.3.1	$H \geq \frac{220 \text{ m}}{500}$	
	$H \geq 0,44 \text{ m}$	4
4.3.2	Horizontal length = $20 \times 0,7 \times 0,44 = 6,16 \text{ m}$	
	Vertical height = $8 \times 0,44 = 3,52 \text{ m}$	4
5.1.1	50 – 1	2
5.1.2	100 – 1	2
5.2.1	winnings = $12 \times 25 = \text{R}300$ payout = winnings + bet = $\text{R}300 + \text{R}25 = \text{R}325$	6
5.2.2	payout = bet + $12 \times \text{bet}$ $13 \times \text{bet} = \text{R}2\ 080$ $\text{bet} = \text{R}2\ 080 \div 13 = \text{R}160$	6
5.3.1	New Zealand/North Korea	
	The odds are the highest: 1500 – 1	3
5.3.2	Spain	
	The odds are the lowest: $9 - 2 = 4,5 - 1$	3
5.3.3	Although South Africa has not been given odds as low as those of New Zealand / North Korea at 1 500 – 1, the odds for South Africa are nonetheless 100 – 1, which is not very favourable. The bookmakers do not expect South Africa to win the tournament. At best they give them a very slight chance.	3

